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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,466

09/27/2006

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EXAMINER

RIZK, SAMIR WADIE

ART UNIT

PAPER NUMBER

2112

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,466	Applicant(s) KIM ET AL.	
	Examiner SAM RIZK	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/22/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTIONS

- Claims 1-6 have been submitted for examination
- Claims 1-6 have been rejected

Specification

1. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (see page 1, line 25). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.
2. Cross reference to related applications section has not been incorporated in the specification. See MPEP §201.11.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Birru et al. US publication no. 2002/0194570 (Hereinafter Birru70).
4. In regard to claim1, Birru70 teaches:
 - A Digital Television (DTV) receiver, comprising:

Art Unit: 2112

- a receiving means for receiving a transmission signal including general data and robust data and converting the transmission signal into a base-band signal;
(Figure 2 in Birru70)
- an equalizing means for determining a symbol level of the transmission signal;
(Figure 2, ref. (250) in Birru70)
- a trellis decoding means for performing trellis decoding on a symbol of the determined level;
(Figure 2, ref. (250) in Birru70)
- a nonsystematic Reed Solomon (NRS) decoding means for performing NRS decoding on the trellis-decoded robust data and correcting an error; and
(Figure 2, ref. (280) in Birru70)
- a restoring means for restoring a digital video data stream with respect to the trellis-decoded general data and the NRS-decoded robust data.
(Section [0008], lines (16-18) in Birru70)

5. Claim 4 is rejected for the same reasons as per claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2112

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 2, 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birru70 as applied to claim70 above, and further in view of Birru US publication no. 2005/0271158 (Hereinafter Birru58).
7. In regard to claim 2, Birru70 teaches substantially all the limitations in claim 1. However, Birru70 teaches:
- The DTV receiver as recited in claim 1, wherein the restoring means includes:
 - a packet formatting means for reconstructing a packet with respect to the robust data;
(Figure 7, ref. (402) in Birru70)
 - an RS decoding means for correcting a forward error with respect to the general data and the robust data; and
(Figure 2, ref. (280) in Birru70)
- However, Birru70 does not teach:
- a data deinterleaving means for deinterleaving the reconstructed robust data;
 - a data derandomizing means for derandomizing the RS-decoded data.

Art Unit: 2112

Birru58 in an analogous art that teaches configuration for implementing enhanced VSB on the studio (receiver) side teaches:

- a data deinterleaving means for deinterleaving the reconstructed robust data; (Figure 2, ref. (201) in Birru58)
- an RS decoding means for correcting a forward error with respect to the general data and the robust data; and (Figure 2, ref. (201) in Birru70)
- a data derandomizing means for derandomizing the RS-decoded data. (Figure 2, ref. (202) in Birru58)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Birru70 with the teaching of Birru58 that comprise the data (MPEG) deinterleaver and derandomizer for VSB receiver.

This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized the need implementing backward compatible VSB receiver system.

8. In regard to claim 3, Birru58 teaches:

- The DTV receiver as recited in claim 2, wherein the restoring means further includes
- a controller for computing delay time for NRS decoding and packet reconstruction with respect to the robust data, and

(Figure 2, ref. (200) and section [0018] in Birru58)

- the data derandomizing means performs derandomization in consideration of the delay time.

(Figure 2, ref. (203) and section [0019] in Birru58)

9. Claim 5 is rejected for the same reasons as per claim 2.
10. Claim 6 is rejected for the same reasons as per claim 3.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - Limberg US patent no. 7197685 teaches robust signal transmission in digital television broadcast.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Rizk whose telephone number is (571) 272-8191. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 2112

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronics Business Center (EBC) at 866-217-9197 (toll-free)

/Sam Rizk/

Examiner, Art Unit 2112